II. BACKGROUND

Submerged aquatic vegetation is defined in the CHPP as "bottom recurrently vegetated by living structures of submerged, rooted vascular plants (roots, rhizomes, leaves, stems, or propagules), as well as temporarily unvegetated areas between vegetated patches" (Street et al. 2005). Submerged aquatic vegetation occurs in both subtidal and intertidal zones and may be colonized by estuarine species, such as eelgrass (*Z. marina*), shoalgrass (*H. wrightii*), or widgeon grass (*R. maritima*) or freshwater species, such as wild celery (*V. americana*) and sago pondweed (*P. pectinatus*). It is well established in the scientific literature that SAV is a valuable habitat for many fishery species in North Carolina, including bay scallop.

The structure of SAV grass blades provides an excellent nursery area and enhances a safe corridor between habitats, reducing predation (Micheli and Peterson 1999). Based on location and abundance of adult scallops in seagrass beds, eelgrass and shoal grass are considered the preferred settling substrate for recruiting bay scallops (Gutsell 1930; Thayer and Stuart 1974; Fay et al. 1983). Vertical attachment on grass beds above the bottom reduces threat to predation of newly settled scallops. The grass bed reduces siltation and currents, which can improve survival and growth rates of scallop spat, respectively (Castagna 1975; Kirby-Smith 1972). Bay scallops forage on microalgae such as diatoms, as well as detritus, bacteria, and other organic matter), which is abundant within SAV beds (Castagna 1975). Spawned eggs are planktonic for approximately 10 – 19 days prior to attaching to a substrate with byssal thread (Fay et al.1983). In areas having more SAV patches interspersed over a larger area, the probability of scallop larvae finding an appropriate settlement site is greater.

III. DISCUSSION

Several bottom disturbing fishing gears have the potential to destroy or damage SAV. The DMF issued a report on shrimp and crab trawling impacts (DMF 1999). Also, the Fisheries Moratorium Steering Committee's Habitat Subcommittee identified specific habitat impacts from various commercial and recreational fishing gears used in North Carolina waters, and made recommendations to minimize such impacts (MSC 1996). The Fisheries Moratorium Steering Committee presented the summary of findings to the Joint Legislative Commission on Seafood and Aquaculture of the General Assembly.

Damage from fishing gear varies in severity. Hand gear, such as bull rakes and large oyster tongs, can uproot SAV and cause substantial damage, but generally to smaller areas than mechanical gears (Thayer et al. 1984). Current MFC rules prohibit use of rakes more than twelve inches wide or weighing more than six pounds in SAV [MFC rule 15A NCAC 03K.0304 (a) (2)]. Use of hand rakes is allowed. Under MFC rules, SAV is a Critical Habitat Area [MFC rule 15A NCAC 03I .0100 (b)(20)]. Only high salinity grassbeds are utilized by bay scallops due to their salinity preferences.